

19

Pat 1  
3152  
5722

**JOURNAL**  
OF THE  
**American Veterinary Medical  
Association**

FORMERLY  
**AMERICAN VETERINARY REVIEW**  
Original Official Organ U. S. Vet. Med. Ass'n.

*Edited and Published for the*  
**AMERICAN VETERINARY MEDICAL ASSOCIATION**  
By  
**H. PRESTON HOSKINS, CHICAGO, ILL.**

*EXECUTIVE BOARD*

R. S. MacKELLAR, Member-at-Large and Chairman;  
N. F. WILLIAMS, ex officio; C. P. FITCH, ex officio;  
A. E. CAMERON, 1st District; E. P. ALTHOUSE, 2nd District; L. A. MERILLAT, 3rd District;  
C. A. CARY, 4th District; R. L. WEST, 5th District; L. M. HURT, 6th District;  
C. H. HAYS, 7th District; J. C. FLYNN, 8th District; H. W. JAKEMAN, 9th District;  
O. V. BRUMLEY, 10th District.

---

**Volume LXXXIII**  
**NEW SERIES VOLUME 36**  
**JULY, 1933, to December, 1933**  
**CHICAGO, ILL.**  
**1933**

SF601  
A5

W.L. 6/6/32

## INDEX OF AUTHORS

- Allyn, W. H., 701.  
Baird, J., 39.  
Baker, G. L., 472.  
Baker, H. R., 472.  
Barnette, W. A., 31.  
Barnes, M. F., 680.  
Bleecker, W. L., 76, 645.  
Boyd, W. L., 791.  
Boynton, William Hutchins, 747.  
Breed, Frank, 656.  
Brunett, E. L., 774.  
Bryan, C. S., 390.  
Buck, J. M., 91.  
Burns, P. W., 627.  
Casserly, T. L., 358.  
Chamberlain, H. D., 444.  
Chandler, W. L., 190.  
Clark, H. C., 358.  
Cobbett, N. G., 247.  
Conner, B. V., 325.  
Cotton, W. E., 91.  
Crawford, A. B., 110.  
Curley, E. M., 593.  
Dale, C. N., 109.  
Davis, C. L., 229.  
Delaplane, J. B., 238.  
Dikmans, G., 101, 203.  
Dimock, W. W., 806.  
Doyle, L. P., 261.  
Essex, H. E., 218.  
Feldman, W. H., 344.  
Flynn, J. C., 464.  
Fritz, B. S., 680.  
Garbutt, R. J., 197.  
Gibbs, C. S., 214.  
Gladish, I. O., 358.  
Hallman, E. T., 159.  
Hamann, E. E., 16, 727.  
Hawn, M. C., 400.
- Hays, I. M., 156.  
Healy, Daniel J., 806.  
Huddleson, I. F., 16, 727.  
Johnson, E. P., 325.  
Johnson, H. W., 16, 727.  
Kernkamp, H. C. H., 666.  
Kinsley, A. T., 449.  
Kleinschmidt, H. E., 834.  
Leeper, R. B., 229.  
Lentz, W. J., 405.  
Little, G. W., 405.  
McCoy, J. E., 50.  
McGregor, A. N., 696.  
McNutt, G. W., 50.  
Mallmann, W. L., 190.  
Mann, F. C., 218.  
Martin, C. L., 188.  
Mathews, F. P., 255, 673.  
Mitchell, W. C., 247.  
Mohler, J. R., 318.  
Pyle, N. J., 618.  
Rebrassier, R. E., 787.  
Sanders, D. A., 799.  
Schlingman, A. S., 604.  
Schlotthauer, C. F., 218, 441, 694.  
Schnelle, G. B., 692.  
Shaw, J. N., 599.  
Shelton, J. E., 229.  
Smith, H. E., 91.  
Smith, R. M., 76, 645.  
Stange, C. H., 584, 764.  
Stein, C. D., 105.  
Stuart, H. O., 238.  
Thomas, E. F., 61.  
Wilcke, H. L., 635.  
Williams, N. F., 301.  
Witter, J. F., 159.  
Zupp, B. A., 261.

## LIST OF ILLUSTRATIONS

PHOTOGRAPH, PALMER HOUSE, 8.

PHOTOGRAPH, EMPIRE ROOM, PALMER HOUSE, 11.

PHOTOGRAPH, DAIRY BUILDING AT A CENTURY OF PROGRESS, 60.

A PRELIMINARY REPORT ON THE STUDY OF POULTRY VERMIFUGES, 61.

- FIG. 1. Chart showing effect of worm treatment on egg-production (Experiment A), 63.
- FIG. 2. Chart showing effect of worm treatment on egg-production (Experiment B), 66.
- FIG. 3. Chart showing effect of worm treatment on egg-production (Experiment C), 68.
- FIG. 4. Chart showing effect of worm treatment on egg-production (Experiment D), 70.

SPLENIC LESIONS IN HOG CHOLERA, 82.

- FIG. 1. Spleens showing formation of hemorrhagic areas not involving the margins of the organ, 83.
- FIG. 2. Early lesion of endothelioid cells and hemorrhage around follicle arteries in marginal area of organ, 87.
- FIG. 3. Large endothelioid cells with numerous mitotic figures surrounding follicular artery. No macroscopic lesions. Acid-fast stain nucleated forms, 88.
- FIG. 4. Endothelioid cells in follicle showing mononuclear and multi-negative, 88.
- FIG. 5. Necrobiotic focus adjacent to follicular artery. Macroscopic lesions evident, 89.
- FIG. 6. Larger artery showing hyalinized intima, 89.

PHOTOGRAPH, DR. F. R. WHIPPLE, 134.

PHOTOGRAPH, DR. E. M. PICKENS, 139.

SOME OBSERVATIONS ON THE PATHOLOGY OF JOHNE'S DISEASE, 159.

- FIG. 1. Case 2444. Segment of small intestine showing earliest grossly recognizable hyperplastic areas, 161.
- FIG. 2. Case 2305, F 3. Macrophage containing rods, and three polymorphonuclears in an otherwise normal tubule of the intestinal mucosa, 163.
- FIG. 3. Case 2305, F 3. Tubule of intestinal mucosa, with some desquamation of the epithelium, containing macrophage with rods and a number of polymorphonuclears, 163.
- FIG. 4. Case 2305, F 1. Tubule of intestinal mucosa showing desquamation of the epithelium, and one macrophage containing rods, 165.
- FIG. 5. Case 2407, 3. Tubule of intestinal mucosa showing some desquamation of epithelium, macrophages, and polymorphonuclears in the lumen, and two giant-cells in the wall of the tubule, 165.
- FIG. 6. Case 2305, E 6. Lumen of tubule of intestinal mucosa containing cell mass consisting of macrophages and polymorphonuclears, 167.
- FIG. 7. Case 2403, 8. Showing location of primary lesions in stroma of intestinal mucosa at A, 167.
- FIG. 8. Higher magnification of point A shown in figure 7, showing macrophages containing rods ( $\times 930$ ), 169.
- FIG. 9. Approximately same location as shown in figure 7, showing giant-cells and macrophages containing rods ( $\times 930$ ), 169.
- FIG. 10. Case 2444, 8. Extensive hyperplasia of the stroma of the intestinal mucosa, 171.
- FIG. 11. Case 2444, 2. Macrophages and giant-cells in lymphatic vessel of the submucosa of the intestine resulting in partial obliteration of the vessel, 171.
- FIG. 12. Higher magnification of macrophages and giant-cells containing rods in lymphatic vessel shown in figure 10 ( $\times 930$ ), 173.
- FIG. 13. Case 2444, 3. Extensive hyperplasia of the submucosa of the intestine, 173.
- FIG. 14. Higher magnification of lesion shown in figure 13, showing enormous number of rods in the macrophages ( $\times 930$ ), 175.
- FIG. 15. Case 2444, 3. Macrophages containing masses of acid-fast rods in close proximity to the epithelium of a gland tubule, 175.
- FIG. 16. Case 2444, 6. Extensive hyperplasia of the stroma of the intestinal mucosa with necrosis of the superficial portions of the villi, 177.
- FIG. 17. Case 2444, 3. Hyperplasia of the stroma and necrosis of the superficial portion of the intestinal mucosa, 177.

- FIG. 18. Point A in figure 17, showing masses of acid-fast rods in necrotic tissue ( $\times 930$ ), 179.  
 FIG. 19. Case 2407, 8. Early lesion in lymph-node consisting of a few macrophages at A, 179.  
 FIG. 20. Higher magnification of point A in figure 19, showing macrophages, three of which are seen to contain one or two rods ( $\times 930$ ), 181.  
 FIG. 21. Case 2444, 2. Giant-cells containing acid-fast rods in subcapsular lymph-space of lymph-node, 181.  
 FIG. 22. Case 2306, C 3. Well-marked lesion in lymph-node showing giant-cells and macrophages, 183.  
 FIG. 23. Case 2407, 4. Higher magnification of similar lesion showing in figure 22, showing giant-cells, 183.

**PHOTOGRAPH, AGRICULTURAL BUILDING AT A CENTURY OF PROGRESS, 187.**

**ANAPLASMOSIS, 203.**

- PLATE I. Photomicrographs of Anaplasma occurring in blood in fatal case of anaplasmosis following splenectomy, 205.  
 PLATE II. Photomicrographs of Anaplasma occurring in blood in fatal case of anaplasmosis following splenectomy, 207.  
 PLATE III. Figs. 1-7, Anaplasma on 5th day of culture. Figs. 8-10, Anaplasma on 7th day of culture. Figs. 11-14, Anaplasma on 18th day of culture. Figs. 15-16, Anaplasma on 20th day of culture, 208.  
 PLATE IV. Figs. 17-26, Anaplasma in blood in fatal field case of anaplasmosis, 209.

**CECAL OCCLUSION IN THE PREVENTION OF BLACKHEAD (ENTEROHEPATITIS) IN TURKEYS, 218.**

- FIG. 1. Technic used in cecal ligation, 220.  
 FIG. 2. Cecums and rectums of operated birds that died of blackhead, 221.  
 FIG. 3. Transverse section of wall of unoccluded cecum ( $\times 100$ ), 222.  
 FIG. 4. Transverse section of wall of unoccluded cecum ( $\times 285$ ), 224.  
 FIG. 5. Transverse section of wall of occluded cecum ( $\times 100$ ), 225.  
 FIG. 6. Transverse section of wall of occluded cecum ( $\times 285$ ), 226.

**CECAL ABLIGATION OF TURKEYS BY THE USE OF CLAMPS IN PREVENTING ENTEROHEPATITIS (BLACK HEAD) INFECTION, 238.**

- FIG. 1. Carcass of chicken demonstrating procedure of bringing the cecums into position for clamping, 240.  
 FIG. 2. Same as figure 1, show the cecums and ready for replacement into the abdominal cavity, 241.  
 FIG. 3. A portion of intestine and cecums of a turkey three months following the operation. The clamps are imbedded in connective tissue, 242.

**FIELD INVESTIGATIONS RELATIVE TO CONTROL OF OESTRUS OVIS, 247.**

- FIG. 1. Improved type of salt-trough with automatic device for applying tar to noses of sheep. (Front view), 251.  
 FIG. 2. Improved type of salt-trough with automatic device for applying tar to noses of sheep. Cross section. (One-third actual size), 252.

**THE TOXICITY OF DRYMARIA PACHYPHYLLA FOR CATTLE, SHEEP AND GOATS, 255.**

- FIG. 1. A pressed specimen of *Drymaria pachyphylla*. (About one-half natural size), 256.

**NEURITIS IN SWINE ASSOCIATED WITH ATYPICAL POSTERIOR PARALYSIS, 261.**

- FIG. 1. Photomicrograph of a section of the peroneal nerve, showing a patchy cellular infiltration, 262.

**PHOTOGRAPH, DR. S. S. BUCKLEY, 281.**

**BLOOD STUDIES OF FOWLS WITH VARIOUS FORMS OF LYMPHOMATOSIS (FOWL PARALYSIS), 325.**

- FIG. 1. Large ovarian tumor, as well as hyperplasia of kidneys and spleen, 333.  
 FIG. 2. Photomicrograph of the tumor shown in figure 1, 334.  
 FIG. 3. Budding of lymphocytes, 335.  
 FIG. 4. Blood-smear from a paralyzed bird with three mast cells in one microscopic field, 335.  
 FIG. 5. Graph showing erythrocyte counts in 53 fowls affected with various forms of lymphomatosis, 336.  
 FIG. 6. Graph showing leucocyte counts in 53 fowls affected with various forms of lymphomatosis, 337.

- THE SENSITIVITY OF CHICKENS TO TUBERCULIN FOLLOWING EXPOSURE TO DIFFERENT VARIETIES OF ACID-FAST BACILLI, 344.**
- FIG. 1. Chicken 2. Marked reaction to mammalian tuberculin. Photograph taken 48 hours after the administration of tuberculin, 347.  
 FIG. 2. Chicken 9. Marked reaction to both avian and mammalian tuberculin. Tuberculin administered 48 hours before chicken was photographed, 349.  
 FIG. 3. Tuberculin sensitivity in a chicken given intratracheal injection 32 days previously, with Hasting strain of acid-fast bacillus. Photograph taken 48 hours after tuberculins had been administered, 352.
- STUDIES ON VACCINES IN INFECTIOUS MASTITIS, 390.**
- FIG. 1. Graph showing results obtained in herd D (21 milking cows in herd) by the use of living autogenous vaccine, 394.  
 FIG. 2. Graph showing results obtained in herd E (19 milking cows) by the use of lacto-vaccine, 397.
- PHOTOGRAPH, DR. C. P. FITCH, 432.**
- PHOTOGRAPH, A. V. M. A. BANQUET, GOLD ROOM, CONGRESS HOTEL, CHICAGO, SEPTEMBER 9, 1909, 436.**
- PHOTOGRAPH, A. V. M. A. BANQUET, GRAND BALLROOM, PALMER HOUSE, CHICAGO, AUGUST 16, 1933, 437.**
- PHOTOGRAPH, DR. COOPER CURTICE, 554.**
- PHOTOGRAPH, DR. FRED L. KILBORNE, 554.**
- WHAT ABOUT VETERINARY EDUCATION? 584.**
- FIG. 1. Graph showing that the maximum number of schools and graduates was reached from 1908-1918, 587.  
 FIG. 2. Graph showing age groups, 589.
- SOME PARASITES OF OREGON WILD LIFE, 599.**
- FIG. 1. Nematodes in young silverside salmon, 601.  
 FIG. 2. Protozoa in skin of mature silverside salmon, 602.
- THE BACTERIOLOGY OF SPLEENS IN THE PREPARATION OF THE LAIDLAW-DUNKIN CANINE DISTEMPER PROPHYLACTIC, 618.**
- FIG. 1. Clinical chart showing typical diphasic rise in temperature in puppy following a 3-cc intramuscular injection of a 20 per cent suspension of "sterile" spleens taken from distemper-infected puppies and ferrets, 621.  
 FIG. 2. Clinical chart of puppy showing temperature curve and symptoms following the subcutaneous injection of *Salmonella enteritidis* which was isolated from distemper-infected spleens, 623.
- ALLERGIC REACTIONS IN DOGS, 627.**
- FIG. 1. Dog 1 (8-3-33). Intradermal reactions one hour following injections of 1:100 and 1:250 dilutions of allergens in glycerin-saline medium, 628.  
 FIG. 2. Dog 1 (7-30-33). Intradermal reactions 24 hours following injections of allergens diluted in normal saline and glycerin-saline solutions, 629.
- NICOTIN SULFATE AS A VERMIFUGE FOR THE REMOVAL OF ASCARIDS FROM POULTRY, 645.**
- FIG. 1. Chart showing average egg production for treated and non-treated pens, 652.
- RESULTS IN THE USE OF FRESH AND OXALATED BLOOD OF SWINE WHEN MAKING CELLULAR COUNTS AND HEMOGLOBIN DETERMINATIONS, 666.**
- FIG. 1. "Blood pictures" with oxalated blood. Percentage of observations above or below the base reading, 670.
- THE TOXICITY OF BAILEYA MULTIRADIATA FOR SHEEP AND GOATS, 673.**
- FIG. 1. *Baileya multiradiata*, 674.  
 FIG. 2. Sheep 16, shortly after recovering from the first prostration, 677.
- DOUBLE DISLOCATION OF THE HIP IN THE DOG, 692.**
- FIG. 1. Posterior dislocation of coxo-femoral joint, 692.  
 FIG. 2. After reduction with Schroeder splint, 692.

FIG. 3. Schroeder modification of Thomas splint as applied in coxo-femoral dislocation, 693.

FIG. 4. Patient 14 days after the injury, 693.

**SPONTANEOUS BILATERAL RENAL CALCULI IN A DOG, 694.**

FIG. 1. A large, soft, white stone in the pelvis of each kidney, 695.

**PHOTOGRAPH, DR. M. F. BARNES, 702.**

**FURTHER STUDIES ON NATURAL BRUCELLA INFECTION IN SWINE, 727.**

FIG. 1. Graph showing the incidence of new Brucella reactions in three herds of swine, 731.

FIG. 2. Graph showing the incidence of Brucella infection in three herds of hogs maintained under different methods of control, 732.

**A TISSUE VACCINE FOR HOG CHOLERA, 747.**

FIG. 1. Temperatures of pig 105. Previous to injection of virus, this animal received two intramuscular injections of hog cholera vaccine which was 90 and 106 days old, respectively, 762.

FIG. 2. Temperatures of pig 109. Before receiving an injection of virus this animal was immunized intraperitoneally with one dose of hog cholera vaccine which was 211 days old, 762.

FIG. 3. Temperatures of control pig 110, following injection of virus. This chart is typical of the charts of all the control animals used in the experiments cited, 763.

**COW'S MILK PROTEIN HYPERSENSITIVITY IN A WALRUS, 810.**

FIG. 1. Young female walrus "Marie" two days after arrival, 810.

FIG. 2. Patient after four months confinement in the Zoo, 811.

FIG. 3. At the height of a reaction an hour after feeding, 813.

FIG. 4. Two months after milk was discontinued, 814.

FIG. 5. "Marie" at the present time, 815.

**FOWL LEUCOSIS, 816.**

FIG. 1. Enormously enlarged liver of pullet S923, 816.

FIG. 2. Dissection showing involved thyroids, thymus and white myeloid neoplastic tissue at lower end of trachea of pullet S923, 817.

## INDEX OF SUBJECTS

### **Abstracts:**

- Actinobacillosis of Cattle in the United States, 411.
- Adrenal Cortical Extracts, Animal Experiments with, 264.
- Agglutination Tests, A New Method of Securing Clear Serum from the Milk of Cows and Goats for, 117.
- Agglutination: With Reference to the Antigenic Analysis of the Brucella Group of Organisms, Optimal Proportions in, 119.
- Anaerobic Infection, Respiratory Metabolism and Tissue Respiration in Experimental, 116.
- Bacillus Abortus*, Vaccination of Mice Against, 562.
- BCG en France (Status of the Question of Antituberculous Premunition of Cattle in France), Etat de la Question de la Prémunition Antituberculeuse chez le Bovidés par le, 698.
- Blood Loss upon the Resistance of Chickens to Variable Degrees of Parasitism, The Effect of, 115.
- Bronchitis of Baby Chicks, 270.
- Brucella Abortus*, Further Attempts at Experimental Infection of Man with a Bovine Strain of, 118.
- Brucella Abortus* Infection in Guinea Pigs, The Effect of Various Therapeutic Agents on, 117.
- Brucella Group, Spondylitis of Swine Associated with Bacteria of the, 826.
- Brucella Group of Organisms, Optimal Proportions in Agglutination: With Reference to the Antigenic Analysis of the, 119.
- Carriers, Filtrable Virus, 825.
- Coccidiosis, Studies on. IV. Mortality and Infection Among Artificially Infected Chickens, 411.
- Coccidiosis by Chemical Treatment of the Litter, The Control of Poultry, 267.
- Coccidiosis of the Liver in Rabbits. I. Experimental Study of the Excystation of oöcysts of *Emmeria Steidae*, 116. II. Experimental Study of the Mode of Infection of the Liver by Sporozoites of *Emmeria Steidae*, 268.
- Dietary and Environmental Factors on the pH of the Intestinal Tract, Effect of, 270.
- Drowned Animals, Water in the Lungs of, 560.
- Edema, The Influence of Mineral Metabolism upon Nephrotic, 417.
- Encephalomalacia in Chicks, Nutritional, 265.
- Enteritis of Very Young Lambs, The Apparent Cause of an Infectious, 118.
- Erythroleucosis, Studies on the Pathogenesis of, 269.
- Fowl Plague Estimated by the Method of Ultrafiltration Analysis, The Size of the Virus of, 825.
- Fox Encephalitis, Epizootic. IV. The Intracellular Inclusions, 823.
- Haemonchus Contortus* in the Sera of Infected Sheep and Goats, The Detection of Proteins of the Nematode, 822.
- Hog Cholera, Histology of Acute, 561.
- Hysteria in Dogs, 699.
- Immunization Against Tetanus, Cutaneous Passive, 826.
- Immunization, Bronchial Disinfection and. The Effects in Rabbits of Intrabronchial Injections of Various Chemical Disinfectants, 412. I. The Effect in Rabbits of Intrabronchial Injections of Vaccines, Bacteriophage and Antivirus, 416.
- Laparotomy on the Respiration, The Measured Effect of, 417.
- Laryngotracheitis in Chicks, 270.
- Leukosis to Chicks, Transmission of Chicken, 117.
- Light on the Bactericidal Properties of Serum, Effect of, 414.
- Lymphadenitis: Ingestion as a Method of Infection with the Preisz-Nocard Bacillus, Caseous. The Growth of the Preisz-Nocard Bacillus in Sheep Feces, 115.
- Magnesium Deficiency in Animals, Studies on. III. Chemical Changes in the Blood Following Magnesium Deprivation, 412.
- Metabolism and Tissue Respiration in Experimental Anaerobic Infection, 116.
- Metabolism upon Nephrotic Edema, The Influence of Mineral, 417.
- Metaphen. I. Results of the Use of Metaphen in Experimental Septicemia, 559. II. Its Experimental Valuation as an Antiseptic and Disinfectant, 559.
- Ovulation and Oestrus in the Ewe During Anoestrus, Artificial Induction of, 264.
- Paralysis, Observations on the Macroscopic Diagnosis of Fowl, 410.
- Parasitism, The Effect of Blood Loss upon the Resistance of Chickens to Variable Degrees of, 115.
- Paratyphoid Infection in Turkeys, Endemic, 826.
- Pneumonia in the Dog, Experimental Pneumococcus Lobar. I. Method of Procedure and Course of the Disease, 265. II. Pathology, 266. III. Pathogenesis, 266.
- Preisz-Nocard Bacillus, Caseous Lymphadenitis: Ingestion as a Method of Infection with the. The Growth of the Preisz-Nocard Bacillus in Sheep Feces, 115.
- Pseudorables (Infectious Bulbar Paralysis, Mad Itch), Studies on, 824.
- Pseudorables Virus by Animal Passage, Modification of the Pathogenicity of, 415.
- Respiration, The Measured Effect of Laparotomy on the, 417.
- "Ruptured Yolk," Studies on the Etiology of, 410.
- Slaughter-Houses, Observations of the Bacterial Flora of Some, 416.
- Sodium Hydroxid, The Germicidal Efficiency of, 414.
- Splenectomy in Bile Fistula Dogs, 267.
- Spondylitis of Swine Associated with Bacteria of the Brucella Group, 826.
- Strychnin Poisoning: Report of Eleven Cases, A Successful Method for the Treatment of, 120.
- Suprarenal Cortex, Studies on the. II.

- Metabolism, Circulation, and Blood Concentrations During Suprarenal Insufficiency of the Dog, 563. III. Plasma Electrolytes and Electrolyte Excretion During Suprarenal Insufficiency in the Dog, 563.
- Tetanus, Cutaneous Passive Immunization Against, 826.
- Thyroparathyroidectomy, The Calcium Content of Dog Tissues and the Influence of, 560.
- Trichinella spiralis*, Effects of Low Temperatures upon Encysted, 415.
- Trichinella spiralis* in Hogs, Resistance to Infestation with. The Eosinophilic and Precipitin Response, 822.
- Tubercle Bacilli in Hens' Eggs, The Presence of, 115.
- Tubercle Bacillus, Biological Studies of the. II. A New Conception of the Pathology of Experimental Avian Tuberculosis with Special Reference to the Disease Produced by Dissociated Variants, 120.
- Tubercle Bacillus, Biology of the. III. Does the So-Called Fatty Capsule Serve to Protect the Tubercle Bacillus? 414.
- Tubercle Bacillus in Soil, Soil and Dung, in Dung and on Grass, with Experiments on the Preliminary Treatment of Organic Matter and the Cultivation of the Organism, Studies on the Survival Time of Bovine, 413.
- Tuberculin on Spermatozoa from Normal and Tuberculous Guinea Pigs, The Effect of, 269.
- Tuberculin-Reacting Cattle, A Study of So-Called Skin Lesions of, 560.
- Tuberculosis, Vaccination with Heat-Killed and Formalized Tubercle Bacilli on Experimental, 823.
- Tuberculosis, Water Metabolism in Pulmonary, 414.
- Tuberculosis Bacillus? Do Tuberculous and Non-Tuberculous Serums Possess Bactericidal Properties for the, 413.
- Tuberculosis in the Guinea Pig, The Relation of Vitamin C Deficiency to Intestinal, 825.
- Tuberculosis Infection in Tissue Culture, Experimental, 268.
- Tuberculosis of the Cornea, The Origin of the Epithelioid Cell in Experimental, 562.
- Tuberculosis of the Cornea in Animals of Varying Resistance, A Comparison of the Cellular Reaction in Experimental, 561.
- Urine in the Dog, The Excretion of. VII. Inorganic Phosphate in Relation to Plasma Phosphate Level, 825.
- Vaccination of Mice Against *Bacillus Abortus*, 562.
- Army Veterinary Service:**
- Changes Relative to Veterinary Officers, 121, 271, 418, 564, 700, 828.
- Association News:**
- American Veterinary Medical Association:**
- Alumni Luncheons, 555.
  - Applications for Membership, 12, 153, 296, 438, 581, 723.
  - Convention Notes, 292, 317, 343, 357, 389, 556.
  - Executive Board Appointment, 435.
  - Executive Board Elections, 11, 581, 722.
  - Exhibitors at the A. V. M. A. Convention, 150.
  - Financial Report—Dr. M. Jacob, Treasurer, 486.
  - Medals, Presentation of, 554.
  - Organization of the American Veterinary Medical Association, 1933-1934, 829.
  - Program Outlined, 2, 152.
  - Proceedings of the Seventieth Annual Meeting:*
  - Amendments to the Constitution, 499, 502, 503.
  - Election of Officers, 491, 507.
  - General Practice, Section on, 546.
  - Installation of New Officers, 543.
  - Military Medicine, Section on, 553.
  - Minutes of the 1932 Meeting, Adoption of the, 476.
  - Poultry, Section on, 550.
  - President, Address of the, 301.
- Reports:**
- Affiliation of State and Provincial Associations with the A. V. M. A., Special Committee on, 498.
  - Agricultural Extension Service, Special Committee on, 525.
  - American Association for the Advancement of Science, A. V. M. A. Representative to the, 503.
  - Bang's Disease, Special Committee on, 493.
  - Budget, Committee on, 540.
  - Education, Committee on, 504.
  - Executive Board, 499, 541, 543.
  - Food Hygiene, Special Committee on, 508.
  - History, Special Committee on, 516.
  - Horse Association of America, A. V. M. A. Representative on the Advisory Board, 496.
  - International Veterinary Congress, Organizing Committee of Twelfth, 537.
  - Legislation, Committee on, 506.
  - Poultry Diseases, Special Committee on, 520.
  - Proprietary Pharmaceuticals, Committee on, 517.
  - Resolutions, Committee on, 541.
  - Secretary-Editor, 476.
  - Treasurer, 486.
  - Tuberculosis, Special Committee on, 518.
  - Veterinary Biological Products, Committee on, 517.
  - Research and Poultry, Joint Session of Sections on, 551.
  - Research, Section on, 548.
  - Sanitary Science and Food Hygiene, Section on, 547.
  - Small Animals, Section on, 552.
- Other Meetings:**
- California State Veterinary Medical Association, 276.
  - Cedar Valley (Iowa) Veterinary Association, 841.
  - Central Nebraska Veterinary Association, 838.
  - Central New York Veterinary Medical Association, 273, 838.
  - Central Ohio Veterinary Association, 697.
  - Chicago Veterinary Medical Society, 840.
  - East Tennessee Veterinary Medical Society, 273.

**INDEX**

- Eastern Iowa Veterinary Association**, 704.  
**Illinois Veterinary Conference**, 488, 707.  
**Interstate Veterinary Medical Association**, 705.  
**Kansas City Veterinary Association**, 129.  
**McLean County Veterinary Medical Association**, 130.  
**Maryland State Veterinary Medical Association**, 423.  
**Michigan-Ohio Veterinary Medical Association**, 131, 840.  
**Nevada State Veterinary Association**, 843.  
**New England Veterinary Medical Association**, 839.  
**New Jersey Veterinary Medical Association**, 565.  
**New York State Veterinary Medical Society**, 278.  
**North Carolina State Veterinary Medical Association**, 277.  
**Northwestern Ohio Veterinary Medical Association**, 423.  
**Oklahoma Veterinary Medical Association**, 420.  
**Ontario Veterinary College Conference**, 279.  
**Pacific Northwest Veterinary Medical Association**, 421.  
**Pullorum Disease Control**, Sixth Annual Conference of Workers In, 132.  
**Purdue University Short Course**, 679, 842.  
**Southeast Kansas Veterinary Medical Society**, 567.  
**South Texas Veterinary Medical Association**, 710.  
**Texas State Veterinary Medical Association** of, 274.  
**Vermont Veterinary Medical Association**, 422.  
**West Virginia Veterinary Medical Association**, 841.  
**Virginia State Veterinary Medical Association**, 280.  
**Wyoming Veterinary Association**, 703.
- Births**.....142, 285, 429, 717.
- Book Reviews:**  
*Chemotherapie, Handbuch der. Erster Teil, Metallfreie Organische Verbindungen.* (Manual of Chemotherapy. Part I, Metal-Free Organic Compounds), 112.  
*Tiere im Chemischen Kriege, Die.* (Animals in Chemical Warfare), 112.  
*Physiology of Domestic Animals, The.* 819.  
*Practice of Veterinary Medicine, The.* 820.
- Clinical and Case Reports:**  
*Blackleg, Lesions in Cardiac Muscle of Young Calves as Sole Evidence of.* 109.  
*Calculi in a Dog, Spontaneous Bilateral Renal.* 694.  
*Dislocation of the Hip in the Dog, Double.* 692.  
*Hymen in a Heifer, Imperforate.* 261.  
*Leucosis, Fowl.* 816.  
*Necrobacillosis of the Liver in a Steer.* 696.  
*Neuritis in Swine Associated with Atypical Posterior Paralysis.* 261.
- Protein Hypersensitivity in a Walrus, Cow's Milk.** 810.  
**Tubercle Bacilli Recovered from Swine, Human and Avian Types of.** 105.  
**Tuberculosis in Hogs Caused by the Avian Type of Tubercle Bacillus, Two Unusual Cases of.** 112.
- Commencements:**  
*Alabama Polytechnic Institute.* 127.  
*Colorado Agricultural College.* 124.  
*Cornell University.* 127.  
*Georgia, University of.* 122.  
*Iowa State College.* 125.  
*Kansas State College.* 123.  
*Michigan State College.* 124.  
*Montreal, Universite de.* 272.  
*Ohio State University.* 126.  
*Ontario Veterinary College.* 122.  
*Pennsylvania, University of.* 272.  
*Texas, A. and M. College of.* 127.  
*Washington, State College of.* 123.
- Editorials:**  
*Changes, Three More.* 153.  
*Chicago Meeting, Program for the.* 2.  
*Chicago Meeting, The.* 287.  
*Chicago, On to.* 145.  
*Codes.* 579.  
*Crossroads.* 11.  
*Dues, Concerning.* 721.  
*Education, Making History in Veterinary.* 575.  
*Education? Who Should Plan Veterinary.* 146.  
*Fitch Inspects Office, President.* 722.  
*Hotel Reservations Early, Make Your.* 8.  
*House of Representatives.* 719.  
*Improvement.* 1.  
*International Veterinary Congress.* 720.  
*Letters Start Some Thoughts, Two.* 147.  
*Ohio Adopts Longer Course.* 10.  
*Pictures, Two.* 435.  
*President, Our New.* 433.  
*Proceedings Number, The.* 431.  
*Quarters, In New.* 580.  
*Serum Producers Organize, Ethical.* 9.  
*Student Enrollment for 1933-34, Veterinary.* 577.  
*West to Executive Board, Doctor.* 435.
- Examinations, State Board.** 567, 843.
- International Veterinary Congress, Twelfth:**  
 Organizing Committee, Members of. 832.
- Marriges**.....142, 429, 572, 717.
- Meetings, Coming Veterinary**....  
 .....14, 154, 299, 439, 582, 724
- Miscellaneous:**  
*AVA, 798.*  
*Barnes, Tribute to Doctor.* 701.  
*Broadcasting Program, New York.* 38, 827.  
*Brown Enters Commercial Field, Doctor.* 133.  
*Buffalo, Inefficient.* 213.  
*Bureau Transfers.* 60.  
*Caller, First.* 679.  
*Canada Invites Visitors.* 81.  
*Chem-O-Therapy.* 700.  
*Chicago, Bring the Kiddies to.* 196.

- Chicago, Reduced Railway Fares to, 90.  
 Chicago Fair, Travel and Transport Building at, 217.  
*Chicagoland Week*, 228.  
*Collie Is Hero*, 471.  
*Collie 'Phones for Help*, 128.  
*Corn Belt Servitor*, 821.  
 County Agent Hopper Cooperates, 837.  
*Dog, Rents Floor of Hotel for*, 228.  
*Dog Week, National*, 471.  
*Encephalomyelitis Appears in the East, Equine*, 665.  
*Encephalomyelitis, New Bulletin on Equine*, 75.  
 Exhibit on Veterinary Research, 254.  
 Experiments on Animals, 443.  
*Find, a Peculiar*, 128.  
*Grandparents*, 786.  
*Hens, Housekeeping*, 463.  
*Hill Entertained, Colonel and Mrs.*, 121.  
*Hogs, Selling Cholera-Infected*, 263.  
*Honor Roll, Two More States Added to*, 213.  
*Horse Prices Hold Their Own*, 49.  
*Hospital Owners Organize*, 836.  
*Indiana State Live Stock Sanitary Board Reorganized*, 246.  
*Insurance, Dog*, 592.  
*Insanity in Caged Animals*, 805.  
*Keeping the Tryst*, 473.  
*Kentucky Tuberculosis-Free*, 828.  
*Michigan Veterinarians to Mexico*, 699.  
*Minerals, She Needed*, 833.  
*Missouri State Meeting*, 111.  
*Mother of Veterinarians Dies*, 691.  
*New Jersey, Anniversary Meeting of the Veterinary Medical Association of*, 809.  
*Oklahoma, Locations in*, 617.  
*Poultry Congress, Fifth World's*, 836.  
*Poultry Number of the Veterinary Journal, Special*, 733.  
*Prosecutions, Something New in*, 634.  
*Rabies Quarantines*, 419.  
*Ray Joins Corn States Doctor*, 818.  
*Scientist and a Scientific Society, An Unscientific Incident Concerning a*, 644.  
*Smallpox Vaccine from Chicken Eggs*, 409.  
*Travel Service, Free Motor*, 120.  
*Tuberculosis Movement, Free Wheeling in the*, 834.  
*Turkeys "Wild," Keeping Wild*, 798.  
*Veterinarians Still on Guard*, 603.  
*Veterinary Service*, 786.  
*Virginia Ladies to Meet*, 104.  
*Virginia Women's Auxiliary Meets*, 425.  
*World's Fair, Finding a Chair at the*, 100.  
*World's Fair, Going Abroad via the*, 228.
- Necrology:**
- Armstrong, John R., 284.  
 Armstrong, Wilfred Ernest, 846.  
 Barnsdale, E. D., 570.  
 Bell, Ralph Mack, 136.  
 Bennett, Leslie Herman, 712.  
 Brennan, Walter Peter Bury, 283.  
 Brown, Albert James, 845.  
 Buckley, Samuel Sutherland, 281.  
 Burt, David W., 428.  
 Clifford, Arthur M., 849.  
 Conner, Claude S., 427.  
 Craver, Samuel R., 715.  
 Creely, Elwin J., 137.  
 Decker, E. J., 426.  
 Draper, Cyrus P., 141.
- Eddy, C. W., 568.  
 Fisher, Robert F., 284.  
 Flowers, G. R., 569.  
 Gibson, A., 429.  
 Graham, LeRoy B., 427.  
 Graham, Percy, 426.  
 Gulfoyle, Harold N., 845.  
 Harkins, Malcolm James, 137.  
 Hart, William J., 844.  
 Hicks, Floyd H., 849.  
 Hillman, John Wilson, 844.  
 Huff, Joseph Neal, 716.  
 Kingma, Richard, 848.  
 Kulp, A. L., 572.  
 Lichty, John M., 428.  
 Lignières, José, 848.  
 McGavick, James A., 138.  
 Martin, Ernest M., 711.  
 Martin, William J., 135.  
 Martin, William Jacob, 571.  
 Moon, Orland J., 141.  
 Nelson, Harmon E., 427.  
 Nilson, Walter L., 711.  
 Nord, Charles F., 141.  
 Palmer, Charles F., 714.  
 Palmer, Dana M., 284.  
 Pechin, Robert Wallace, 713.  
 Pederson, Gunerius Mont, 569.  
 Perschbacher, John, 140.  
 Pickens, Earl Max, 139.  
 Pugh, Edward, 844.  
 Pyper, Samuel T., 428.  
 Ridge, William Hodgson, 847.  
 Ross, James T., 138.  
 Sarver, Walter G., 135.  
 Sayre, Charles Edward, 850.  
 Self, Presley M., 845.  
 Shepard, Edgar H., 570.  
 Shirley, Stonewall Jackson, 846.  
 Shutte, Vernon D., 848.  
 Simmons, P. L., 850.  
 Stokes, Josiah, 850.  
 Taylor, Frank Parks, 713.  
 Torrance, Wilfred J., 570.  
 Troutwyler, Joseph A., 571.  
 Udy, Thomas Watson, 282.  
 Wheeler, George Waterbury, 283.  
 Whipple, Frederick Random, 134.  
 Willmot, John, 283.  
 Winchester, Fred Nelson, 845.  
 Winslow, Charles E., 714.
- Papers:**
- Allergic Reactions in Dogs, 627.  
 Anaplasmosis in Florida, Notes on the Experimental Transmission of, 799.  
 Anaplasmosis. V. The Nature of Anaplasma, 101. VI. The Morphology of Anaplasma, 203.  
 Ascarids from Poultry, Nicotin Sulfate as a Vermifuge for the Removal of, 645.  
*Baileya Multiradiata* for Sheep and Goats, The Toxicity of, 673.  
 Bang Disease Control Work in Fourteen State Institution Herds. II. Progress Report to 1931, 680.  
 Blackhead (Enterohepatitis) in Turkeys, Cecal Occlusion in the Prevention of, 218.  
 (Blackhead) Infection, Cecal Abligation of Turkeys by the Use of Clamps in Preventing Enterohepatitis, 238.  
 Black Tongue, 54.  
 Blood and Urine of Colts, The Chemical Character of the, 806.  
 Blood of Swine When Make Cellular Counts and Hemoglobin Determinations, Results in the Use of Fresh and Oxalated, 666.

- Brucella Abortus* in Pregnant Cattle, Studies of the Skin as a Portal of Entry for, 91.  
*Brucella* Infection in Swine, Further Studies on Natural, 727.  
*Brucella* Infection in Swine and Employees of Packing-Houses, A Study of, 16.  
 Bulla-Osteotomy in the Dog, With Case Reports, Further Observations on, 50.  
 Business Side of Our Profession, The, 464.  
 Cecal Obligation of Turkeys by the Use of Clamps in Preventing Enteritis (Blackhead) Infection, 238.  
 Cecal Occlusion in the Prevention of Blackhead (Enteritis) in Turkeys, 218.  
 Commercialism, Ethical, 156.  
 Disinfection of Avian Fecal Material, On the, 190.  
 Distemper by Serum Concentrate—Living Virus, Simultaneous Injections, Production of Immunity to Canine, Preliminary Report, 405.  
 Distemper Prophylactic, The Bacteriology of Spleens in the Preparation of the Laidlaw-Dunkin Canine, 618.  
 Distemper, Studies on Canine. IV. Immunization of Dogs by Means of Bacterial Products, 604.  
*Drymaria Pachyphylla* for Sheep and Goats, The Toxicity of, 255.  
 Education? What About Veterinary, 584.  
 Fowl-Pox, Experiments on, 188.  
 Fowl-Pox Vaccination, Studies on, 774.  
 Hog Cholera, A Century of, 449.  
 Hog Cholera, A Tissue Vaccine for, 747.  
 Hog Cholera, Developments Concerning, 764.  
 Hog Cholera, Splenic Lesions in, 82.  
 Humane Organizations, The Relationship of the Veterinary Profession to, 197.  
 Inspection Services of the Veterinary Corps, U. S. A., The, 593.  
 Johne Disease, Some Observations on the Pathology of, 159.  
 Kamala as a Tenicide for Young Turkeys, The Value of, 400.  
 Lameness and Its Treatment in the Horse, 39.  
 Laryngotracheitis, The Massachusetts Plan for the Eradication and Control of Infectious, 214.  
 Lymphomatosis (Fowl - Paralysis), Blood Studies of Fowls with Various Forms of, 325.  
 Mastitis, Studies on Vaccines in Infectious, 390.  
 Neoplasms Encountered in Federally Inspected Establishments in Denver, Colorado, 229.  
 Nephelometer Solidified with Pectin, Antigen, 472.  
 Nicotin Sulfate as a Vermifuge for the Removal of Ascarids from Poultry, 645.  
 Nutrition, Some Problems in Poultry, 635.  
*Oesophagostomum Columbianum* Larvae, Bacteria as Food for, 787.  
 Oestrus Ovis, Field Investigations Relative to Control of, 247.  
 Parasites of Oregon Wild Life, Some, 599.  
 Progress in the Medical Sciences, 441.  
 Sterility, Bovine, 791.  
 Sterility in Cattle, 31.  
 Swine in the United States, Recognition of the Most Important Infectious Diseases of, 656.  
 Tenicide for Young Turkeys, The Value of Kamala as a, 400.  
 Tuberculin Following Exposure to Different Varieties of Acid-Fast Bacilli, Sensitivity of Chickens to, 344.  
 Tuberculosis in Illinois, Control of Avian, 444.  
 Trypanosomiasis—"Murrina" or "Derrengadera"—Some Notes on the Disease in Panama, Equine, 358.  
 Urine of Colts, The Chemical Character of the Blood and, 806.  
 Vermifuges, A Preliminary Report on the Study of Poultry, 61.  
 Veterinary Medicine, Economic Aspects of, 318.
- Personals**.....142, 285, 429, 572, 717  
**Publications Received**.....113, 263, 626

